Sussdorff

Respectfully, Compliments of the Author.

A CONTRIBUTION

TO THE

DIFFERENTIAL DIAGNOSIS BETWEEN

HOLLOW UTERINE POLYPUS

AND

COMPLETE INVERSION OF THE UTERUS.

BY

G. E. SUSSDORFF, M.D.,

NEW YORK.

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(With two woodcuts.)

It is comparatively rare, even in an extended experience, to meet with cases of hollow uterine polypi, and rarer still to find them simulating complete chronic inversion of the uterus.

Very little has been written about this variety of polypoid growth, and what literature there is upon the subject is meagre and barren of instruction in respect to their pathology, or of information that will assist in establishing a correct diagnosis. There are not more than four cases of this kind on record.

Colombat mentions having operated upon a large hollow tumor, which looked so much like an inverted uterus, after its removal, that he at first feared he had mistaken an inversion for a polypus.

Richmond and Jules Cloquet had a similar experience, but were not able to prove that the uterus had not been removed until some years after, when the patient died, and a post-mortem examination revealed its presence.

Boivin and Dugès mention a polypus of this character in their work, and state that before its removal it was considered an inversion by several distinguished physicians.

The late Dr. Henschel, of New York, reported a case of the kind some few years since, before the New York Obstetrical Society. Baker Brown and Thomas simply refer to these cases in their works.

With the exception of the above cases the archives of medical literature yield no further information. With the hope,

therefore, of contributing something more to our present knowledge on this subject, I propose, as briefly as possible, to report a case which came under my care some three years since, and to add a few remarks upon diagnosis and pathology. This unusual and in many respects extraordinary case illustrates very clearly the perplexing nature of these tumors, and the difficulties to be solved before a positive diagnosis can be made. The history of the case is as follows:

Mrs. S. P——, a tall, thin brunette, forty-nine years of age, and a widow for some years, was the mother of several children, the last of which she had borne twenty years before. She had never had an abortion, and had usually enjoyed good health, with the exception of occasional attacks of dyspepsia and intermittent fever.

Her menses first appeared at the age of fifteen, and until the beginning of her present sickness she had never had, as far as she could recollect, any uterine trouble.

According to her statement, her present illness began some two years before, and was brought on suddenly from having attempted to lift some heavy article of furniture. She was immediately attacked with hemorrhage from the vagina, pain in the loins and back, weight and dragging in the pelvis, nausea and great prostration—in short, by such symptoms as usually accompany a sudden displacement of some portion of the pelvic viscera.

She was compelled to take to her bed at once, and her family physician, who attended her, pronounced her case to be a form of uterine displacement, the exact nature of which I could not ascertain from her. Neither could I learn what treatment had been employed other than that she had been kept in bed for three weeks, and that pessaries had been worn for some time after. At the end of a month the acute symptoms had subsided, and soon after she was sufficiently recovered to attend to the ordinary duties of her household.

Her general health had received a severe shock, and nervous symptoms soon came on, such as severe and continued headache and great irritability of temper. The menses, which previous to the attack had been regular, sufficient in amount, and without pain, had now become irregular, in respect to both time and quantity, and were always painful. There had been a considerable sanguino-purulent discharge at the beginning of her attack, which continued as a thin, irritating leucorrhœa.

There had been considerable difficulty in defecation and some dysuria, until the pessaries which she had worn successively were abandoned, and all efforts at supporting treatment discontinued.

At the end of six months her general condition had not improved.

It seems at this time her physician told her that she was passing through the climacteric period or change of life, and counselled her to be patient and endure her ills with as much fortitude as she could command, in the hope of permanent relief when cessation should

come. As a consequence of this advice, and from a mistaken impression on her part, and that of her friends, that no good would result from active medical treatment under such conditions, she received but little attention for many months. Cessation did not come, and despairing of relief from natural causes, (?) she again sought medical advice. At this time, some two months before I saw her, the menstrual periods had ceased to be distinct, the flow had become continuous. She was examined, and her case this time pronounced prolapsus uteri. The prolapsus, she was told, had then been reduced.

In spite of the reduction and constitutional treatment, such as large doses of tinct. ferri chlor., tinct. cannabis indicæ, gallic acid, etc., and tonic treatment in general, the flow continued and her debility increased.

To such an extent had this state of affairs reduced her that she presented, at my first visit, an almost exsanguinated appearance, and was so weak as scarcely to be able to move from her chair to the bed.

This is the history of the case up to the time she first came under my care. The facts as here stated were given me by the patient and her sister, with whom she lived. I was unable to obtain any information from the physicians who attended her, which I regret, since this history might thereby have been made more complete. The period embraced in this history was about two years.

Having obtained the information just given, and finding my patient willing to submit to a thorough physical exploration, I proceeded at once to examine her.

Upon introducing the finger into the vagina, a large body was at once discovered lying a short distance from the vulva, and completely filling the canal. Carefully passing the finger along the surface of this body, and at the same time making downward pressure through the abdominal walls with the other hand, its extent and character were sought for.

The body of the tumor was about the size of an orange, and seemed quite movable. Its surface was smooth, except a few circumscribed spots, which were elevated and a little rough. It was not lobulated but evenly ovoid. In consistence it was firm, though compressible, elastic, and tough. It was slightly sensitive, though not painful.

The pedicle was attached to the cervix, and was but little smaller than the body of the tumor. It was firmly adherent, and was closely surrounded by the lips of the cervix, which were thickened, congested, and painful.

The attachment was considerably higher on the right side of the cervical canal, as near as could be judged, very close to the internal os; it then gradually approached the external os on the left.

The vaginal walls gave no signs of being diseased. The posterior portion of the vagina contained fluid, which was principally blood and mucus; but these secretions were not specially offensive.

The tissues of the anterior portion of the pelvis and the base of the bladder were somewhat dense and painful. The perineum was in a normal condition.

These physical signs so far indicated the tumor to be a polypoid growth, and seemed to explain the cause of all her suffering.

All these symptoms and signs, however, belong as much to inversion of the uterus as to polypus. It needed, therefore, the confirming evidences of the sound to complete the diagnosis. The case seemed simple enough.

Introducing the left index-finger into the vagina as a guide, an attempt was made to pass an ordinary Simpson's sound, but at no point could an opening be found. Other probes of different sizes were used, every point between the pedicle and lips carefully and patiently explored, but with no better result. The probe was completely obstructed at every point. Suspecting the case might possibly be a complete inversion, instead of a polypus, I again examined the tumor with the fingers. All the signs previously elicited were confirmed, *with this addition:* strong pressure upon the body of the tumor gave evidences to the feel that it was *hollow*. It could be indented, and would resume its original form as soon as the pressure was removed. It yielded to the finger like a soft hollow india-rubber ball does when pressed upon.

This discovery, added to the failure to pass the sound, was sufficient to produce a considerable degree of perplexity. Other measures of physical exploration, however, remained, such as conjoined manipulation, rectal touch, and recto-vesical exploration, but finding my patient tired and nervous I thought it better to delay further examination for the time, and left her, after having prescribed an anodyne and large doses of fluid extract of ergot for internal administration, besides astringent vaginal injections, and an enema to clear out the rectum.

The question to be settled was evidently one of differentiation, and the history of the case, interesting though it was, could give but little positive diagnostic information. This could alone be obtained from physical signs.

At my next visit the following morning, the patient was seen with me by my friend the late Dr. C. B. Nottingham, of Georgia, and several other gentlemen of skill and experience, and a thorough and final examination made.

A summing up of the investigation showed the following results:

1st. The probe was completely arrested at the neck.

2d. Conjoined manipulation did not reveal the uterine body, nor did it reveal a ring where one horn of the uterus should be.

3d. Rectal touch revealed a small ovoid body, lower than normal for the uterus, and a little above a line corresponding with the junction of the vagina to the neck.

4th. Recto-vesical examination by means of a sound in the bladder and two fingers in the rectum did not reveal the uterus in the anterior, upper, or lateral parts of the pelvis. The fingers in the rectum discovered the body before mentioned, but the probe in the bladder could not be made to touch it.

5th. The pedicle was very large.

An analysis of the above proved:

That the probe favored inversion.

Conjoined manipulation gave nothing.

Rectal touch revealed a body which was probably the uterus, but it might be a tumor formed by the liquid confined in the recto-uterine sac of the vagina, or a pelvic tumor.

Recto-vesical exploration gave no reliable information.

The size of the pedicle favored inversion.

The evidence, when analyzed, was anything but satisfactory or conclusive. Had the uterine body been recognized, and the tumor been an ordinary polypus, the probe would have been worked through the tissues surrounding the pedicle into the uterus, and thus have proved incontestably the nature of the case. This necessary information was wanting, and, as matters stood, such a proceeding was not justifiable.

With the view, therefore, to determine, if possible, the structure of the tumor, a strong pair of placental forceps were ap-

plied, and it was pulled down, and brought well without the vulva. It here presented the same characters as before stated, was covered by mucous membrane, and flecked over with bright, fleshy-looking spots, which were very vascular. Percussion and pressure confirmed the presence of *a cavity*. Detachment of the pedicle was attempted by means of the finger-nail and the handle of a scalpel, but the tissues were tough, and besides considerable bleeding ensued from the congested lips of the cervix which surrounded the pedicle. The tumor was returned to the vagina, and the best means of treatment, supposing the case to be an old complete inversion, were considered. Amputation was the only measure likely to insure good and speedy results. The condition of the patient would admit of no prolonged course of treatment.

But amputation of the womb is a very serious operation, excision of a polypus a very simple one. Feeling unwilling to operate for amputation as the case stood, I determined once again to essay the probe.

Two reasons in addition to those already mentioned prompted me to do this. First. When the tumor was being dragged to the vulva for inspection, I noticed that the lips of the cervix surrounding the pedicle remained the same; *there was no shortening*. The other reason was, that when traction was made, the small ovoid body which was felt through the rectum followed the tumor downwards also. Selecting a stout Simpson's sound, it was introduced between the pedicle and cervix, and that portion of the attachment highest up, to the right, selected as the best point to make the effort to pass it.

Counter-pressure was made through the thin abdominal walls with the left hand, and a firm and steady boring force used by means of the probe in the right. After a few moments, the tissues yielded and the probe slowly passed inwards. Finding that it would not enter to a greater depth than $2\frac{7}{8}$ inches, I attempted to approximate it to the abdominal walls, which, after some effort, was accomplished. The probe had undoubtedly entered the *womb*, and not the *abdominal cavity*.

This proved incontestably the nature of the case. It certainly was not an inverted uterus, but a polypoid growth.

The treatment pursued, in a few words, was as follows: A

stout double silk ligature was passed through the pedicle high up within the cervix, tightly tied, and the parts returned into the vagina. The ligature was applied instead of the knife, because the tumor was very vascular and further hemorrhage would not have been borne by the patient without imperilling her life. The galvano-cautery would no doubt have been better, but was not procurable. No hemorrhage or constitutional disturbance followed the operation, and on the sixth day after, the tumor came off. From this time the patient began steadily to improve, and at the end of the year had regained health and strength. The hemorrhage ceased at the time the tumor was ligated, and the menses have not returned up to the present date.

One point I came near omitting to mention, which will in a measure account for the absence of the uterine body from the anterior, upper, and lateral portions of the pelvis, and also for its low position as discovered by rectal touch.

Three weeks after the operation my patient complained of dull, aching pain in the pelvis and back, and desiring to inspect the condition of the os, I made a specular examination. The cervix was still somewhat dilated, congested, and hypertrophied. The sound entered the uterus two and a half inches, and discovered it to be in a state of *extreme retroversion*. It is quite likely that this condition of retroversion had existed for a number of years, and that it was present even to a greater extent at the time of my first examination, when the polypus was *in situ*.

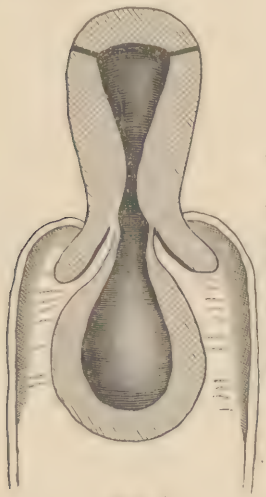
The close resemblance of this tumor to complete chronic inversion, with the relation of parts to each other, will, perhaps, be better appreciated by examining the accompanying wood-cut No. 1.

REMARKS ON DIAGNOSIS.

The diagnosis of these cases depends mainly upon the probe, but not always, since it sometimes happens, as in this case, that it will give but limited information when commonly essayed.

In endeavoring to ascertain the presence or absence of the uterus by other means, the result in all such cases will be unsatisfactory, even in the most skilful hands. Indeed there are many instances on record in which errors were committed, fol-

lowed by fatal results, from a neglect to use with care this means of diagnosis. It is not a very infrequent occurrence for an inverted uterus to be mistaken for a polypoid tumor; neither is it very unusual to mistake for the pedicle of such tumors an inverted part of the uterus to which it is attached, and remove it by incision or ligature. Instances of this last kind have been reported by Denham, William Hunter, and others, which resulted fatally. An instance of the first kind is cited by Dr. Thomas in his work, in which a celebrated surgeon of this city, after a hasty examination, removed a tumor which he thought a polypus hanging in the vagina, and found to his surprise that he held in his hand an inverted uterus and its appendages; the patient fortunately made a good recovery. How many cases are there like this one, of which we hear nothing! The experience of Colombat and Madam Boivin has already been alluded to.



This cut is simply diagrammatic, and shows the uterus with polypus attached.

The space represented here between the lips of the cervix and pedicle did not really exist—the parts were in such close juxtaposition that the finger could only with difficulty be forced between.

It is intended by the space to show the attachment of the pedicle, and to illustrate the principle upon which traction gives positive diagnostic results.

FIG. 1.

The information gained in my case from measures of investigation commonly used, and before the probe was made to pass the obstruction, was of such an ambiguous character that a diagnosis might have been made of either inversion or polypus with equal plausibility.

The solution of these difficulties by the probe, however, was brought about in this instance by corroborating measures not

usually resorted to, or fully appreciated *in this respect*. I refer to *traction upon the tumor* and to *rectal exploration*.

I regard these measures as scarcely second to the probe as a means of diagnosis in such cases, and especially where the patients are fat, and the abdominal wall thick. Traction upon tumors in the vagina is an old proceeding, and is usually done for the purpose of operating, but it is of importance in other respects.

The tumor in this instance was brought to the vulva for purposes of inspection, in order thereby to gain some definite information respecting its structure, to verify the previous examination made by touch, and to search for an opening into the uterus. The results gained from this have been stated before.

The value which I attribute to traction as a means of diagnosis has already been intimated, but I desire to call special attention to it as a method which cannot be over-estimated in such cases as have been considered in this paper.

Traction, when carefully practised, will give the following information:

If the tumor in the vagina is a polypus, attached to one lip, or by several points to the cervix, or if it be such an one as has here been described, the relation of the parts to each other, as they existed while *in situ*, will remain *unchanged* when brought to the vulva. If the tumor be an inverted uterus the relation of the parts to each other as they existed in the vagina will be greatly changed when exposed to view. The lips of the cervix which surrounded the pedicle will have disappeared, having also become inverted, and along with it, probably, the vagina at its junction with the neck.

If the case be one of polypus, and partial inversion of the fundus at the point where the pedicle is attached, it will at once be revealed, whereby the errors cited by Denham and William Hunter may be avoided.

If the force used in making traction be steady, slow, and gentle, no lacerations of integral parts will ensue, or bad results supervene secondarily.

The operation of drawing the parts down is not usually difficult. When the tumor is very large it may be troublesome to manage, but otherwise it is not so. Vulsellum forceps are rec-

ommended for this purpose, and are good, but I regard the placental forceps, with blades which rotate, as much better. The blades can be made to dilate the vagina around the tumor, and will readily slide over the surface of the tumor and grasp it. If a stout pair be used, and the tumor fixed by its transverse diameter, its hold will be secure and there will be no slipping. The tumor having been brought without the vulva, and securely held there, the other means mentioned should be instituted, viz.: rectal exploration. The value of this means is only secondary to traction, because, to get positive information by rectal touch, the tumor must first be drawn down, otherwise the normal location of the uterus is almost beyond reach of the fingers. The parts being at the vulva, rectal touch will confirm the signs obtained of the presence or absence of the womb. To do this effectually the sphincter ani muscle should be temporarily paralyzed by forcible dilatation with the thumbs and two fingers introduced into the rectum, the ends separated, and the uterus searched for. If the uterus is not inverted it can easily be felt lying low down in the pelvis, and its entire surface examined, the traction holding it steady, so there can be no rolling.

If the uterus be inverted the fingers at once discover its absence, and will easily detect a ring made, either by one horn of the uterus or by the opening in the os. This procedure is much superior in obscure cases to other methods. It will confirm and corroborate the information gained by traction.

If, therefore, the relation of parts is not changed by traction, and rectal exploration reveals the uterine body in the pelvis, the probe should be made to pass whatever obstruction there may be at the neck. Force, however, I consider bad practice under any circumstances. It seems to me a far better way is to first make a narrow, longitudinal incision in the pedicle as high as possible, and through this opening introduce the probe. This should be done while the parts are at the vulva. If the probe enters to the proper depth the diagnosis is complete without *the shadow of a doubt*. The parts are then in position to receive appropriate treatment, and should not be returned until the operation is completed, whether it be for amputation or excision.

With these three means of diagnosis, viz., the probe, traction, and rectal touch, the difficulties of differentiation need no longer be formidable.

A few words, in conclusion, respecting the pathology of hollow uterine polypi—taking the one here represented as a specimen. I regret exceedingly that I was unable to submit it to a microscopist for examination. It was minutely examined, however, by the unassisted eye, and its grosser character studied several days after its removal. It was then considerably smaller than when *in situ*. In structure it was fibro-cellular, and covered by a thick mucous membrane. Its internal surface was composed of connective uterine tissue, with a few fibres of muscular structure. The walls were quite thick, more so in some portions than in others. It was least so at its fundus, where it measured about two lines, and gradually increased towards its attachment in thickness and density until it measured from four to five lines. The walls enclosed a single cavity, which had undoubtedly been continuous with the canal of the cervix above the point of attachment. This cavity had a capacity of ℥ iss. liquid measure. The remainder of a few Nabothian glands were recognized in the walls just beneath the mucous membrane. Its surface was smooth and not lobulated or fissured. No blood-vessels of any size were observed, although some would no doubt have been seen under the microscope, as the mucous membrane enveloping the growth was in a state of hypertrophy. I am unable to say positively that the cavity in the polypus did not contain any fluid previous to its excision. There were no evidences of this when examined, if I except a small quantity of viscid mucus, which probably came from the uterus. There were no signs of coagulated blood within the cavity, neither was there any cheesy matter present. In several places of limited extent there was considerable hardness of calcareous nature. Upon its external surface there were small elevated spots, varying in size from a millet-seed to a large pea, which were fungoid, and had been one source of the hemorrhage. The surface was impervious. There were no openings leading to the cavity within. The appearance of the tumor after removal is represented by woodcut No. 2.

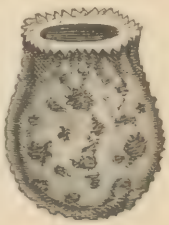


Fig. 2.

With respect to the formation of these extraordinary growths very little is known. Madam Boivin accounts for the one she describes, upon the theory that the uterus had become coated by some plastic material, had been ripped off except at its cervical attachment, and had become inverted by menstrual fluid collecting above.

The specimen exhibited by the late Dr. Henschel was examined by Dr. Noeggerath, who accounted for it in the same way as Madam Boivin.

The history of the case which I have reported appears to me to warrant a different conclusion from that just mentioned. It appears far more reasonable to suppose that it began as an exfoliation of the true mucous membrane of the body of the uterus, in fact was a remarkable case of membranous dysmenorrhœa. Some of the older writers, such as Dewees, Naegele, and Désormeaux, believed that the common forms of membranous dysmenorrhœa were cases in which the uterine cavity had become covered with plastic lymph from a diseased condition of the uterus which is now denominated endometritis. This theory is the same, no doubt, as the one upon which Madam Boivin based her opinion; but this theory is no longer accepted as true. The theory first instituted by Dr. Oldham, viz., that the membrane expelled in dysmenorrhœa is true mucous membrane exfoliated as a consequence of congestion and irritation of the uterus, is the one now generally accepted, and may be applied to this case. In this instance the invasion of the attack was sudden, the exciting cause having been a straining effort to lift a heavy weight. The age of the patient at the time of the attack and the date at which the menses first appeared are sufficient grounds for believing that she was entering the climacteric period, and that the uterus previous to the attack was in a congested state, and was the predisposing cause. The exciting cause in this instance was the effort made in lifting, and the womb as a result was displaced and its mucous membrane at the same time forcibly detached to a very great extent of its surface, carrying with it more or less submucous and connective tissue. This view of the beginning of the exfoliation is made stronger from the fact that there was a sudden and considerable hemorrhage at the time in addition to the symptoms indicating displacement. The gradual progressive exfoliation

of these tissues no doubt continued after this until the internal os was sufficiently dilated to admit of their extrusion into the vagina by the irritated body of the womb, and they were held at their attachment to the cervix, because the tissues there were too dense to permit further exfoliation. When the membrane was first expelled, which probably happened at least a year before it was removed, it is quite probable that it was perforated in many places and that these openings closed as the tumor became hypertrophied, or, rather, were filled up by a new tissue, which corresponded with the vascular spots of fungoid character, already alluded to.

The predisposition of the uterus to polypoid growths about the time of the climacteric period is conclusively shown by Dr. Tilt in his work on Change of Life, in which he embodies in a tabular form his own and Dupuytren's experience, embracing the history of fifty-seven cases. Of this number, twenty-three occurred in women between the ages of forty and forty-nine. This is favorable to the views expressed respecting the beginning of the exfoliation of the mucous membrane. I have not been able to gather any information fixing the ages of those patients operated upon for hollow polypus, except Mme. Boivin's case, in which the patient was 44 years and married, and my own patient, who was 49. It is not unreasonable, however, to infer from correlative statements occurring in the histories of the other three cases, that they also were between the ages of 40 and 50.

Hollow polypi are a variety entirely distinct from all others. There are some other kinds which somewhat resemble them.

"The channelled polypus" of Dr. Oldham, which he describes in *Guy's Hospital Reports*, April, 1844, is something like them, but a close examination and comparison of that tumor, as it is there represented by a woodcut, with the one here described, will at once show their dissimilarity.

There is no similarity between hollow polypi and the cystic polypi which Dr. Lee has described. There may, however, be some analogy between these polypi and the one reported by Mr. Langstaff in vol. 17, *Med. Chirurgical Trans.*, in which there was a small cavity filled with cheesy matter and hair. Still its structure and mode of attachment were different.

Hollow polypi I would account for as the result of complete

exfoliation of the entire uterine mucous membrane, inverted and expelled into the vagina by the womb except at its attachment, where it is held and nourished by the cervical blood-vessels, which cause its further development.

44 WEST TWENTY-THIRD STREET.